

SCIENCE & GOVERNMENT REPORT

14th Year of Publication

The Independent Bulletin of Science Policy

Volume XIV, Number 8

P.O. Box 6226A, Washington, D.C. 20015

May 1, 1984

DeLauer Ridicules New Plan

Pentagon R & D Chiefs Feuding on Campus Secrecy

Two recent, little-publicized meetings on Pentagon-mandated secrecy in academic research merit notice because they displayed what outsiders have only previously glimpsed: The wondrous administrative and bureaucratic confusion that has accompanied the curtain-pulling effort and the openly expressed belief that outside of a few rich universities, academe is for sale on the government's terms. The first meeting was at the Pentagon and the other was at a university-sponsored discussion in Washington. Let's take them one at a time.

The inescapable aroma of muddle in high places permeated a Pentagon conference room April 17 when the DoD-University Forum—comprising big academe and Defense research brass—gathered for its semi-annual get-together. The Forum, which functions as an institu-

co-chairs the Forum with Kennedy.

The letter stated that "we have been told that research that was judged to be 'applied' and also 'sensitive' would be subject, as part of contract provisions, to 90-day publication holds with DoD approval required.

"We write to tell you that absent major changes in [the universities'] research policy—which we regard as very unlikely—our institutions would be unable to ac-

(Continued on page 2)

Whatever Came from Uproar Over Science Education? Q & A—Page 4

tionalized bull session, is an odd offspring of Reagan's Washington. Powerless and not meeting often enough to exert influence in the frenetic capital, the Forum nonetheless provides the major research universities with an important illusion—access to presumably sympathetic high places in an Administration that has none of the customary reverence for academic sensitivities. As an official of the Association of American Universities once explained to SGR, "This gives us a connection to the friendliest people we can find in the Defense Department."

High on the agenda for the latest get-together was the showdown issue of DoD's newly devised scheme for creating a category of Defense-supported research, unclassified but "sensitive," for which permission for publication would rest exclusively with the Pentagon. The Defense research officials who had unveiled the new category in March insisted that it would apply to less than one percent of Pentagon-supported research on campus. The response was a blast from the presidents of three universities with which DoD is eager to do business: Paul Gray, of MIT; Marvin Goldberger, of Caltech, and Donald Kennedy, of Stanford. It came in a brief letter to the President's Science Adviser, George A. Keyworth II, and the Defense Under Secretary for Research and Engineering, Richard D. DeLauer, who

In Brief

The Defense Science Board, top science-advisory body in the Pentagon, has lined up a diverse group of subjects for its coming annual round of summer studies, many of which have proven influential. Topics are: Urban Warfare (which a Board staffer explained is "like the city version of war in the country"), Chairman, Donald Hicks, Vice President, Northrup; Space-Based Radar, Chairman, Daniel J. Fink, consultant and former aerospace executive, and Improving Current Inventory Equipment (which, we're told, refers to beefing up stock), Chairman, Donald Rice, President, the Rand Corp. The sessions will be held July 23-August 3 at the Air Force Academy.

The purple prose gushed last week when Health and Human Services Secretary Margaret M. Heckler presided over a press conference on identification of what's apparently the cause of Acquired Immune Deficiency Syndrome. "The arrow of funds, medical personnel, research and experimentation . . . has hit the target . . . only two or three rings from the bulls-eye," she declared—to which she added that "the progress made to date will keep the research and investigation throttle on the floor."

Irwin Feerst, an engineer who's been a longtime gadfly against many professional societies' indifference to the economic interests of their members, protested to the AAAS about ads in *Science* offering scandalously low wages and got back a reply from AAAS President Anna J. Harrison that, in part, said: "There was a time in my career when I would have gladly worked without salary to advance my competencies and consequently my career." Feerst publishes a spicy newsletter: Committee of Concerned EE's, PO Box 19, Massapequa Park, NY 11762.

... DeLauer: Let's Study Polka-Dot Areas, Too

(Continued from page 1)

cept any research contracts subject to such a restriction."

DeLauer, generally regarded as one of the more enlightened figures in the gloom of the Pentagon, listened at the Forum meeting while Kennedy and several other academics reiterated the points in the letter. He then looked on while his chief subordinate on this issue, Edith W. Martin, Deputy Under Secretary for Research and Advanced Technology, defended the "sensitive" category, which was devised by a panel she chairs. The research involved, she said, "isn't something you want to classify and it isn't something you want to freely put out in the public domain. How can you in a satisfactory manner control it for whatever period of time it's appropriate to that specific technology and its transition at whatever rate it goes?"

DeLauer: I have yet to figure out in my own mind what are these "sensitive" areas. I can decide whether it's sensitive to a degree that it ought to be classified, or sensitive to a degree that it ought to be completely the other one, and make the decision well ahead of time.

Kennedy: You and Edith are saying completely different things.

DeLauer: I know we are. Edith and I have had a parting. It doesn't mean just because we happen to have to come to work in here at the same time and go home at the same time, we always have to agree on these things. She's got a different job than I have. My feeling is that the more ambiguous we make it, the tougher it is to administer it by the guys down in the field. I'd rather have her make a determination in the beginning and say that this is a classified subject, and, Don Kennedy, do you guys want to work on it, or don't you? Don Kennedy says, Hell, no, I don't want to work on it. And it's all clear, and there's no question about it. I think people can make those decisions.

Martin: We're talking about whether there is a "gray area," as referenced in the Corson report [*Scientific Communication and National Security*, by a committee of the National Academy of Sciences, 1982 (SGR Vol. XII, No. 17)]. The Corson report said if there turns out to be a difficult-to-manage and sensitive area, then

somebody has to think what to do about it.

DeLauer: Yeah, you've got to make a decision.

Martin: All right, we're trying to be on the power curve and not behind it . . . I feel that what you've gotten [from Martin's DoD panel and a joint DoD-university workshop group] is a status report, and one should not take a status report as a final report. And much ado has been made about something that's in progress as opposed to the proposed final position by a group that has studied the subject for a year and a half to two years, and at the point that we got to review [the issue] as it was converging in the two groups. That's where we were, and we found a bone of contention and in finding that we started looking at other solutions. I don't think we should try to adjudicate it in this group, because there's been an agreement already that we should look for viable options, be they a clearcut "let's-make-a-decision," or are there some other intermediate solutions.

The discussion rambled on, with DeLauer, to Martin's obvious chagrin, repeatedly challenging, and even ridiculing, the concept of gray areas and unclassified but sensitive research, while several university representatives joined in. Finally, DeLauer summed up his position with a suggestion that Martin conduct a new examination that would include "not just gray, but make it polka dot." To which he added:

"I'd like to have some of the polka dots identified. I don't know what the hell we're talking about. I don't know how serious it is. You keep talking about one percent. And within the one percent we keep talking about something else." Whereupon co-Chairman Kennedy said with a straight face, "Nobody disagrees that a lot of marvelous progress has been made here," and received endorsement for proceeding down the agenda.

These remarkable proceedings were expanded upon the following evening at meeting on the very same subject that had been long before scheduled. The sponsor was The George Washington University Graduate Program in Science, Technology, and Public Policy, which periodically brings together the Washington science-policy community for discussion of current as well as

(Continued on page 3)

© Science & Government Report, Inc., 1984

ISSN 0048-9581

Editor and Publisher
Daniel S. Greenberg

Associate Publisher
Wanda J. Reif

Circulation Manager
Margaret E. Lee

Contributing Correspondents

Francois Segquier (Paris); Ros Herman (London)

Independently published by *Science & Government Report, Inc.*, twice monthly, except once each in January, July & August. Annual subscription: Institutions, \$144.00 (two years, \$255.00). Information about bulk and individual rates upon request. Editorial offices at 3736 Kanawha St. N.W., Washington, DC 20015. Tel. (202) 244-4135. Second-class postage at Washington, D.C. Please address all subscription correspondence to Box 6226A, Northwest Station, Washington, DC 20015. Reproduction without permission is prohibited. SGR is available on Xerox University Microfilms. Claims for missing back issues will be filled without charge if made within six months of publication date.

Sagan, Nature Editor Swap Abuse on War Danger

A transatlantic venom exchange has broken out between Carl Sagan, the Paul Revere of "nuclear winter," and John Maddox, editor of *Nature*, who has scoffed at it as a flimsy and alarmist thesis.

In a widely distributed letter, dated April 13, to *Nature's* publisher, Sagan and several colleagues declare that Maddox's "dedication to fairness and accuracy . . . cannot be relied upon," because, in the view of the Sagan camp, Maddox has editorially belittled the concept of nuclear winter, while refusing *Nature's* columns to its adherents. They charge that Maddox "has apparently criticized our work, in terms at once patronizing and incompetent, without giving us an opportunity to respond." And they express "hope that this chaos can be at least partially remedied" by publication in *Nature* of a rebuttal to Maddox, titled "Nuclear Winter Should be Taken Seriously."

From London, Maddox told an inquiring SGR last week that he regards the letter as "defamatory" and its accusations as "all untrue." When asked if his use of "defamatory" suggested a resort to the popular English practice of suing one's detractors for libel, Maddox simply replied, "I said the letter is defamatory." As for nuclear winter—the term for a worldwide icing over

from nuclear-induced dust shielding the sun—Maddox insists that substantial supporting evidence is lacking.

On January 12, six weeks after a big and well-publicized meeting in Washington on nuclear winter, Maddox wrote in *Nature* that those familiar with the difficulties of studying dust from volcanos "will be wondering where the apparently much more precise data about nuclear dust has come from." The article was titled "From Santorini to Armageddon," the former being an island wiped out by a volcano in 1626BC. Maddox also noted that "everybody, Sagan *et al.* included, agrees that this field is shot through with uncertainty."

Sagan says he wrote to Maddox on January 27, requesting an opportunity to reply to that commentary, but, as of mid-April had not received a reply. Asked about this, Maddox told SGR, "We did not receive that letter. We've searched the office and are unable to find any trace of it."

Sagan, who is a Professor of Astronomy and Space Sciences at Cornell and perhaps the best-known science popularizer of our time, is an ardent arms controller and supporter of peace causes. Maddox, who has rejuvenated *Nature* to what many consider to be the world's leading general scientific journal, has demonstrated little patience for environmental alarmists, anti-nuclear campaigners, or any of the many other causemongers who cast doubt on the goodness of science and the need for more of it.

The Sagan letter charges that after the nuclear winter thesis was discussed at that Washington meeting late last year, *Science*, *Bioscience*, and *Physics Today* and the popular press provided extensive coverage. And it goes on to charge that "We understand that at least one reporter from *Nature* was present and submitted a news item on the conference, but the editor of *Nature* saw fit to reject it."

To which Maddox responds that his two-reporter Washington bureau was missing a man that day, and there were other events to be covered. This is confirmed at the bureau, which says no report was rejected, because none was prepared.

Noting that *Science* of December 23, 1983, carried a paper, "Nuclear Winter: Global Consequences of Multiple Nuclear Explosions," by five authors, including Sagan, the Sagan letter says that "several scientists urged various members of the *Nature* editorial staff to consider discussing these results" in the journal's news section, "but were told that the editor of *Nature* would not hear of it." Maddox denies that he would not hear of it, but apparently nothing was presented for him to hear on the subject.

On March 1, Maddox was back at the subject with an article in *Nature*, "Nuclear Winter Not Yet Estab-

(Continued on page 4)

Security

(Continued from page 2)

stale subjects. On hand to take part was Edith Martin's principal subordinate on academic information controls, Leo Young, DoD's Director of Research and Laboratory Management.

Asked to comment on the previous day's meeting, and particularly on whether DoD expected to find academic takers for classified research, Young replied:

" . . . there will be some universities, like Stanford, MIT, and Caltech, who do excellent work, and we hate to lose their researchers. So, if we can possibly work out a compromise, we would very much like to do so . . . The answer is, yes, there are universities that do classified research. On campus, yes. Georgia Tech would be one, for example. Essentially what we have, to be very blunt about it, is a marketplace. There are buyers and sellers. And DoD is buying research . . . If I were at a university, I'd like as few restrictions as possible. I'd say to DoD, 'Trust me and if something sensitive comes up, I'll make sure it doesn't get published.' And DoD says, 'We'd like to trust you, but maybe you'll make a mistake' . . . In effect, what seems to be happening, is that the strongest research universities, who can afford to be fairly independent, are saying, 'Trust us. Don't put any restrictions on us, and we'll do the best we can.' The ones that are harder put to it to find research dollars will tend to accept conditions that we make. It's really that simple. It's a marketplace, it's negotiable . . ."—DSG

Q & A: Whatever Happened to Education Issue?

Science and math education have recently gone through another cycle of extravagant popular and political concern, followed by near-disappearance from the public stage. For a perspective on this latest round and its consequences, SGR spoke on April 18 with one of the most seasoned veterans of national education politics, F. James Rutherford, former Assistant Director for Science Education at the National Science Foundation (1977-80) and the first Assistant Director for Educational Research and Improvement in the US Department of Education (1980-81). Once a high school science teacher, Rutherford holds a doctorate from the Harvard School of Education and from 1971-77 was Professor of Science Education at NYU. He currently is Chief Education Officer of the American Association for the Advancement of Science. Following is a transcript of our conversation, edited by SGR:

Q. *What's come out of the past two years of public concern about science and math education?*

A. It's far too early to know if the kids are learning any more, but there's a lot of activity around the country. The action is in the states. They're passing legislation, bumping up graduation requirements, they're putting in rules about "social promotion"—they're against it. They're saying you can't play basketball if you don't have a C-minus average. There's some money beginning to flow in from state legislatures. Some places have passed tax measures. A few places have increased teachers salaries, though pretty marginally, I think. There have been quite a few attempts to put some back-

bone in the system. Many are ill-advised, but at least they're making the effort. There are things like merit pay systems in quite a few states now. California has a version, Florida has one. There's some motion on the side of the universities to restore admission requirements that call for a little more science and math.

Q. *You sound skeptical. Are you?*

A. My concern is that most of it isn't very structural. There's very little going on out there that deals, for example, with the problems of content. What science should they study? You tell the students they've got to take three years instead of one or two. But which science for which purpose? Do we really mean that rhetoric about all the students taking all that science, or is it just forcing them into chemistry and physics they're not now taking.

Q. *Is there a parallel interest in curriculum revision?*

A. There's very little discussion of curriculum out there. Almost none. The talk is about taking more courses.

Q. *Does that suggest that curriculums are on the shelf and ready for use? Or is curriculum simply being ignored?*

A. I think it's largely being ignored for the moment. For example, what do you see NSF doing? They're giving away some money now to people to develop materials. Now, if you go over and ask which materials for which courses for what purposes, it's all very vague. There hasn't been an effort, either at the national or at any state level that I know of, to reexamine the premises

(Continued on page 5)

... Charge Maddox with Aversion to Doomsday Theories

(Continued from page 3)

lished," which noted that *Nature* was not ignoring the scientific issue of nuclear winter. For in that issue was a paper, "Global Atmospheric Effects of Massive Smoke Injections from a Nuclear War: Results from General Circulation Model Simulations," by Curt Covey, Steve Schneider, and Stanley L. Thompson, of the National Center for Atmospheric Research. Their findings, concluded Maddox, "soften the results described by Sagan *et al.*"

Meanwhile, the paper that Sagan and company sent over Maddox's head to the publisher of *Nature* (Elizabeth Hughes, a purely business type) is a bit harsher than that:

"Maddox's critiques, filled with contradictions and unsupported by any calculations whatever, are puzzling," it says. "Is it possible that his reading of this work is biased by positions he has previously staked out? Maddox is the author of a book, *The Doomsday Syndrome* . . . which begins as follows: 'This is not a

scholarly work, but a complaint,' a sentence that might apply as well to his two editorials in *Nature*.

"Not all readers of *Nature*," continues the Sagan letter to *Nature's* publisher, "may be aware of the depth of Maddox's commitment to the notion that prophecies of disaster are 'at best pseudoscience. Their most common error is to suppose that the worst will always happen . . . This book is an attempt to show why these prophecies should not keep people awake at night . . .'"

The letter concludes with another swipe at Maddox's performance: "It seems to us much more serious and irresponsible to minimize, on shallow and unsupported technical grounds, a possible grave peril to our civilization and our species."

The signatories of the letter, along with Sagan, are his fellow authors of the *Science* paper on nuclear winter: R. P. Turco, of R&D Associates, and O. B. Toon, T. P. Ackerman, and J. B. Pollack, of NASA Ames Research Center.

... NSF's Slow Return to Science Education

(Continued from page 4)

about what it is you want kids to learn in science and mathematics. There hasn't been an effort to look at the existing courses that are in place or that were generated before and ask whether those things fit or not, and if they don't, to start investing in curriculum development. I don't see much motion at all toward serious curriculum development.

Q. Are the textbook publishers filling the gap?

A. Look at the books. They rarely deal with contemporary science. They cover typically 600 pages of classical stuff. It's short on applications and on broad conceptualizations. They're encyclopedias of things that are accepted in the various sciences. It's not at all clear that for purposes of citizenship and jobs that that kind of science has any payoff. The books are mostly now, in my judgment, very dull. The market indicates that. If you don't legislate the kids into it, they don't do it. They don't think they ought to do it, because it doesn't have anything for them. Besides its hard.

Q. Is the typical curriculum too remote from the world that the students see around them?

A. They think it's remote and they think it's difficult. The physics courses tend to be somewhat watered-down versions of college physics courses, which are watered-down versions of graduate courses. What I'm claiming is that there hasn't been a thorough reexamination of what it is we ought to be teaching in science, maybe not in a century. What we did in the sixties was accept the notion of the major disciplines, biology, chemistry, and physics, as to what should be the content of each of those. And I think that had some impact. But still, the vision was primarily of students who were going to go on to professional careers. Now all this rhetoric from the National Science Board Commission and all the others is that everybody does science. And I think we at least ought to examine that. That's been kind of left out of the equation in the process of trying to get students to take more.

Q. Are you suggesting that we're overdoing it by saying everyone should study science?

A. No, but I'm skeptical that the traditional course is the course for everyone.

Q. The National Science Foundation is supposed to help improve science education. What is it doing?

A. Several things have been going on. [NSF Director] Ed Knapp is seriously committed to the notion that they ought to do something. But I think he's very inexperienced in going about getting it done. For example, he has indicated that each of the research directorates have to do some education things. That sounds good to people in the sciences, because they feel you ought get people who know real science to be concerned about

NSF Fills Education Post

A second slot in the long-vacant upper echelons of the National Science Foundation has been filled, this one the post of Assistant Director for Science and Engineering Education. The appointee, announced April 25, is Bassam Z. Shakhshiri, Professor of Chemistry and Director of the Institute for Chemical Education at the University of Wisconsin, Madison.

The post, which was abolished by the Reagan Administration and then revived when science education became a trendy issue, has been filled on an acting basis for over a year, along with the deputy directorship and several other assistant directorships.

Last time around, which was during the Carter Administration, the NSF education post was filled by Presidential appointment—of which NSF has four for its allotment of six assistant directors. This time, however, the appointment was made by NSF Director Edward A. Knapp, who has been visibly dismayed by the White House's long and unexplained failure to clear appointments for NSF. The only other senior vacancy filled so far is the assistant directorship for Biological, Behavioral and Social Sciences, for which the appointment of David T. Kingsbury, of UC Berkeley, was announced by the White House last month.

Shakhshiri, a Lebanese native who came to the US in 1957, holds a doctorate from the University of Maryland. As of last week, there was no word on when he will join the NSF staff.

these things. But the fact is that in a bureaucracy, you hire that person in physics to know the territory out there and give good physics research grants. And to expect them to know enough, or even want to know enough, to divert their attention to this other business seems to me not only mistaken but naive. In the end, they're not going to do it. The second thing Knapp did was to fail, in my judgment, to get any leadership over there. There hasn't been an Assistant Director for Education since I left early in 1980.

Q. Surely in this big country there's someone for the job, isn't there?

A. There has to be. There's a substantial number of people for the job. Knapp finally got to filling the job on an acting basis with Pat Bautz [Director of NSF's Astronomical Sciences Division], who didn't know the first thing about science education. There was no reason to expect that she would. She didn't know the names of the people, what kind of programs there had been, and nothing of the history. She wasn't relieved of her job in

(Continued on page 6)

... Fund Projects, Don't Wait for Proposals

(Continued from page 5)

astronomy to take on this God-awful thing of trying to put a machine that had been bombed back together again.

Q. Does that reflect naivete on Knapp's part, or does it mean he just didn't want anything to get done?

A. My guess is that he's naive. I felt he should have quickly gotten someone [an appointment was announced April 25], but that was up to the White House and beyond his control.

Testing Techniques Antiquated

Q. Assuming NSF gets some leadership in education, what might they be doing that's now neglected?

A. I think they should, as little as possible, replay last time—the post-Sputnik period. Some of the work ought to be done over again, but the trouble is it seems a little tired now. My belief is that they should take a look at the territory and say, Well, of all the things that need doing, where's some that we think we can do? And go out and get it done. That is, stop waiting for proposals to come in with good ideas. Take some territory, for example, curriculum. They should say, Look, what do we have, what is the curriculum, what do these kids in the seventh grade actually take? What if we got all of them to take science as juniors and seniors, what is it that they should have? Get the best people in the country. Tell different groups, We want your best thinking. And out of that maybe move toward the support of some curriculum development on some new terms. A lot of claims are being made about what students know and do not know. The testing is pretty feeble. It was in the 1920s and '30s when most of the testing theory was developed that we rely upon. Isn't it time to get a bunch of really first-rate people now who understand science and who understand new testing techniques to see if it isn't possible to find some better ways of discovering what kids know in science and mathematics? To see what they know individually and as groups, so we can make some decisions based on something more solid? Now, testing is a touchy proposition.

Q. Ideologically and politically?

A. Yeah, everybody is afraid that tests will drive the machine. Well, tests may drive the machine. That just tells me that instead of having ETS [Educational Testing Service] or somebody do it, maybe there are other options, if we investigate it. Take the question of the use of educational technology. It may be that we can't solve the teacher problem. Maybe we can't get two-and-a-half-million people who have the attributes that you'd like to have who will take those jobs. So, you say, What are other ways of thinking about it? Maybe if we could

really use technologies imaginatively and massively, that would allow us to really reduce the teaching staff, particularly at the high school level, and use those people who are really good in different ways and really pay them. There's no reason high school physics has to be taught five days a week. If you have a good physics teacher, why not two, three days a week? Why not six weeks on, six weeks off? Particularly when you have video tapes, computers, access to information. All over the world, there are good examples of open university programs that successfully use these techniques. But our dumping all that money into putting computers into schools—well, that mainly amounts to doing current textbooks electronically. We're asking the wrong questions about computers in the schools. What we should be looking into is how we can exploit contemporary communications and information technologies. We should look at use of satellites, cable transmissions, on-site video taping, computers, video disks, radio—a vastly underused technology. And you would get some first-rate groups around the country, top engineers and scientists, educators and content people, and they would start working to see if it isn't possible to develop the mechanics of essentially the transportation system of knowledge. And then, if that were designed and developed, then you could use some local resources for part of it, federal resources for other parts of it, and the filling up of those channels becomes fairly easy, once they exist. The way it is now, for example, if somebody makes a good film or a television series, you can't get the stuff delivered into the classroom, because the delivery costs are too complicated.

Q. Is that a role for NSF?

A. Yes. NSF is small and big when it comes to money. It's small, if you try to underwrite teacher institutes all over the country, or if you give people money here and there to develop books and films. But it's a big chunk of money if you used it somehow or other to undermine the system, or at least get down to some basic elements of the system. Why hasn't NSF taken a chunk of the available money they weren't able to spend last year and used it to support some bright people and send them off to Woods Hole and say, Don't come back again until

(Continued on page 7)

AID in Environment Study

Establishment of an interagency task force on ecological and conservation issues in Third World countries has been announced by the US Agency for International Development. The task force, which will report to Congress in November, is chaired by Nyle C. Brady, AID's Senior Assistant Administrator for Science and Technology.

... No Solution Possible Without Money

(Continued from page 6)

you have some ideas and structure. And send another group out someplace else. Get some external thinking done. They could have done all of that last year and then be pumping some money out. Now it's an embarrassment. NSF isn't asking for any increase for next year for science education. I assumed that OMB [Office of Management and Budget] was responsible. But at OMB they say, NSF is choking on the money they've got; why should we give them more?

Institute of Education

Q. Is the National Institute of Education playing a role in science and math education?

A. There's practically no money at NIE beyond the funds that are committed to the regional labs and centers. The NIE has never been able to get out from under that. The regional labs could take on some of that work, and maybe that will happen now that they have to compete for money. Maybe the regionals will come in with some ideas, instead of just saying, Let us continue to do what we're doing. They're a little frightened out there, and that's good. I hope that when they make the next round of awards, they will really look at the ability of the institutions. Part of the problem at NIE is that during the first couple of years, the Reagan Administration wanted to get rid of the whole enterprise. So they got rid of some people and put in some ideologues. I think a lot of that is over now. Maybe now they've settled down, and will start to do a little more. But they don't have much money for science and math. The Department of Education keeps saying it has some. [Secretary of Education Terrel] Bell has a discretionary fund he can use for it, and he keeps talking about it, but I don't see results.

Q. The President's Science Adviser [George A. Keyworth II] and the Director of NSF have said that a key element of their strategy is to get university science departments more involved with the local schools. What's happening with that?

A. I don't see anything happening. I see a few places where there's a little good will. But I think that's as naive as expecting the Assistant Director for physics at NSF to give education grants. The bloom is off the sage. The young faculty members know damn well they have other things to do if they want tenure; the middle-career people are all caught up in doing research, and don't want to spend time out in the schools to get to understand the problems. Sometimes the very senior people can become statesmen. But they're oftentimes better in the role of working on big curriculum projects. I think something like that could be useful, if there were a

framework they could fit into. But, to preach to scientists that they ought to go out to the schools—well, they're as uncomfortable going to the schools as school people are going to the university. Knapp keeps saying it isn't going to get better until the parents get involved. But what's that mean for a parent in the South Bronx? It's kind of a truism that's neither here nor there. It's like the truism that money won't solve the problem. Of course, it won't. But it sure as hell isn't going to be solved without money. The idea is to get the money and be smart in using it.

In Print

Impacts of Neuroscience: Background Paper, an offshoot of the Congressional Office of Technology Assessment's ongoing study of Technology and Aging. Produced at the request of Rep. Edward R. Roybal (D-Cal.), Chairman of the House Select Committee on Aging, the neuroscience study says "Congressional attention" is warranted for environmental exposure to neurotoxic agents, federal support of research and training in the neurosciences, and ethical problems related to neurosciences—such as determination of mental competence.

(36 pages, \$2.50, Superintendent of Documents, USGPO, Washington, DC 20402; specify Stock No. 052-003-00946-3.)

Federal Funding of Engineering Research and Development, 1980-1984, report prepared by the American Society of Mechanical Engineers' Federal Government Relations Department, says support for engineering has grown some but has lagged behind other fields of federal interest; the report, a new undertaking for the ASME, contains analysis and tables.

(34 pages, \$8.50 for ASME members, \$11 for others, ASME, 2029 K St. Nw., Room 603, Washington, DC 20006.)

Applicants Get NIH Reviews

Under a newly adopted policy, applicants for research grants from the National Institutes of Health will automatically receive the summaries—the "pink sheets"—of peer-review comments and scores. The sheets were previously available only upon request and only after peer-review ratings had been reviewed at the next layer in the NIH review process, the institute councils. The change, which has been recommended by researchers and professional societies, is intended to provide more feedback from the review process.

NSF to Honor Congressman, Science Editor

Rep. Edward P. Boland (D-Mass.), who's been delivering the goods for the National Science Foundation through his chairmanship of a House Appropriations Subcommittee since 1977, has been named to receive one of NSF's Distinguished Public Service Awards.

Bestowed by the National Science Board, NSF's policymaking body, the awards are given annually "for leadership, public service and dedication in the support of American science and science education," according to an NSF announcement. In the past the NSF managers have innocently and uselessly bestowed the award on friendly legislative lame ducks on the way out of the fray. But the triumph of good sense is evident in the decision to honor one who can continue to do good for NSF. Boland is considered a shoo-in for reelection.

Also to be honored with one of the awards is Philip H. Abelson, the long-reigning editor of *Science* magazine, whose successor is due to be announced this year, probably in the fall. There are many rumors but no firm word on the choice, for which a short list is due to be presented to the the Board of the parent American Association for the Advancement of Science at the AAAS annual meeting this month. Abelson, who became editor in 1962, has said he will retire by next January. The search committee for a new editor is headed by Professor Frederick Mosteller, of the Harvard School of Public Health.

Another award winner is Roger E. Revelle, oceanographer and Professor of Science and Public Policy

at UC San Diego. He's to receive the fifth Vannevar Bush Award, named after the World War II research chief who recommended creation of NSF, and bestowed annually on a leading elder statesman of science.

The counterpart award for up-and-coming scientists, the annual Alan T. Waterman Award, will go to Harvey M. Friedman, Professor of Mathematics at Ohio State. The only one of the awards that goes beyond a medal and citation, it provides a grant of up to \$50,000 a year for three years of research and advanced study.

The awards will be given May 9 at the annual dinner of the Science Board, to be held at the National Academy of Sciences, in Washington.

French Agency Posts US Aide

The French counterpart of the National Science Foundation, the *Centre National de la Recherche Scientifique* (CNRS), has posted a representative in Washington to provide information about its programs and promote cooperation with American researchers. He is Albert Lumbroso, a theoretical physicist from the nuclear research center at Saclay, near Paris. Lumbroso's address: CNRS, French Scientific Mission, 2011 Eye St. Nw., Washington, DC 20036; tel. 202/659-3550.

Science & Government Report
Northwest Station
Box 6226A
Washington, D.C. 20015

Second class postage paid
at Washington, D.C.

XEROX-UNIVERSITY MICROFILMS
300 N. ZEEB RD.
ANN ARBOR, MI 48106

